

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Donald R. Huffman, et al. Examiner: P. DiMauro  
Serial No.: 08/236,933 Art Unit: 1103  
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For: NEW FORM OF CARBON

Assistant Commissioner for Patents  
Washington, DC 20231

DECLARATION

Sir:

I, WOLFGANG KRATSCHEMER, declare and say as follows:

1. I am one of the co-inventors of the subject matter described and claimed in the above-identified application.

2. The other co-inventor of the subject matter described and claimed in the above-identified application is Donald R. Huffman.

3. It should be noted that Donald R. Huffman and I are professors at different institutions. Donald R. Huffman is a professor in the Department of Physics at the University of Arizona in Tucson, AZ while I am a professor at the Max Planck Institute for Kernphysik in Heidelberg, Germany.

4. Moreover, both of us are among the co-authors of an article entitled: "The infrared and ultraviolet absorption spectra of laboratory produced carbon dust: evidence for the present of the C<sub>60</sub> molecule" in Chemical Physics Letters, 1990, 167-170 (hereinafter referred to as the article).

5. In addition to myself and Donald R. Huffman, there is an additional co-author of the article described in the previous paragraph: K. Fostiropoulos.

6. While K. Fostiropoulos is a co-author of the publication, it is my opinion that and I have been advised by

counsel that he is not a co-inventor of the subject matter described and claimed herein.

7. At the relevant time, K. Fostiropoulous was a doctoral student conducting experiments in my research group in the laboratories at the Max-Planck Institute in Heidelberg, Germany towards completion of his doctorate from the University of Heidelberg in Germany.

8. Although K. Fostiropoulous performed experiments described in the article, those experiments described therein which he performed were conducted under my direction and supervision.

9. It is my opinion that and I have been advised by counsel that K. Fostiropoulous is not an inventor of the subject matter described in the publication.

10. I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the above-referenced application or any patent issuing thereon.

Dated: Sept. 10, 1992

W. Kratschmer  
WOLFGANG KRATSCHMER

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**appraise**, *v.* **appraised**, *pt.* **appraising**, *pp.* [ME. *appraiven*; OFr. *appraier*, *appraier*, *appraier*; L. *appraeare*, to value, esteem.]  
 1. to set a value on; to estimate the worth of a thing; to value.  
 2. to estimate the quantity of.  
 3. to judge the quality or worth of.  
 4. to speak well of. [Rare.]  
**appraiser**, *n.* 1. the act of setting the value; the business of an appraiser.  
 2. an appraised value.  
**appraisal**, *n.* 1. the act of appraising; specifically, the act of setting a value on property or any other thing.  
 2. [Fr. *appraiser*, to worship, adore, adore, and praise, to pray.] earnest prayer.  
**appraisement**, *n.* [Obs.]  
**appraisingly**, *adv.* enough to be appraised; to be appraised; as, an appraisal of the amount.  
**appraisable**, *a.* capable of being appraised.  
**appraisably**, *adv.* in an appraisable manner; in an appraisable way.  
**appraisant**, *(-ant)*, *a.* appraisative. [Rare.]  
**appraisative**, *a.* appraisative. [Rare.]  
**appraisation**, *n.* [Fr. *appraisier*, to appraise, to value or estimate, from *ap*, to, and *praeare*, to value.]  
 1. to value; to esteem; to be conscious of the difference, inferiority, or worth of; to estimate; as, we seldom sufficiently appreciate the advantages we enjoy.  
 2. to recognize gratefully; as, to appreciate a kindness.  
 3. to increase the price set on; opposed to depreciate.  
 4. to be fully or sensitively aware of; to distinguish; as, to appreciate differences of color.  
 5. to estimate; to value; regard.  
 6. to estimate things when we do not by calculation; as, to appreciate a point of value; we appreciate when we prize according to their true value or worth.  
**appreciate**, *v.* [to rise in value; as, public securities appreciate when the debt was paid.]  
**appreciatingly**, *adv.* with appreciation.  
**appreciation**, *(-ation)*, *n.* 1. an appreciating; a grateful recognition of good points; a grateful recognition, as of benefits.  
 2. sensitive awareness; discriminating perception or enjoyment, as of art.  
 3. the rise in value or price; opposed to depreciation.  
**appreciative**, *a.* feeling or exhibiting appreciation.  
**appreciatively**, *adv.* in an appreciative manner.  
**appreciative-ness**, *n.* the quality of being appreciative.  
**appreciator**, *n.* one who appreciates.  
**appreciatively**, *adv.* appreciatively.  
**appreciatory**, *a.* appreciative; as, appreciatory words.  
**apprehend**, *v.* **apprehended**, *pt.* **apprehending**, *pp.* [Fr. *apprehendre*, L. *apprehendere*, to take hold of; *ad*, to, and *prehendere*, to take hold.]  
 1. to take or seize; to take hold of; in this sense, applied chiefly to the arrest of persons by legal process, or with a view to jail; as, to apprehend a thief.  
 2. to take hold of mentally; to perceive with the mind; to understand.  
 3. to fear; to anticipate with anxiety or dread; as, we apprehend calamities.  
 4. to note; to learn by observation; to discover by experience.  
 5. each man avails him of what worth he apprehends in you.  
 6. to become aware of, or have perception of; the senses; to have a clear impression; as, if a man sees two distinct persons, he apprehends them as different persons.  
 7. to understand, comprehend, anticipate, receive, arrest, dread.  
**apprehension**, *n.* 1. to think; to grasp ideas; to apprehend very thoroughly.  
 2. to be apprehensive; to expect calamity; fear.  
**apprehensive**, *a.* one who apprehends.  
**apprehensively**, *adv.* with apprehension.  
**apprehension**, *n.* understanding.  
**apprehensibility**, *n.* the state or quality of being apprehensible.  
**apprehensible**, *a.* capable of being apprehended.

**apprehensibility**, *adv.* so as to be apprehended. [Rare.]  
**apprehension**, *n.* 1. the act of taking into custody or arresting; as, the felon, after his apprehension, escaped.  
 2. [often in pl.] fear; dread; the thought of future evil, accompanied with uneasiness of mind; apprehensiveness.  
 3. the act of taking in mentally; mental grasp; as, the special charm of Stevenson's works is that, to our apprehension, the characters always seem real people.  
 4. the faculty by which new ideas are conceived; as, a man of dull apprehension.  
 5. opinion; the result of a mental impression; as, in our apprehension, the facts prove the issue.  
 6. Syn.—arrest, disquietude, alarm, suspicion, comprehension, estimation.  
**apprehensive**, *a.* 1. quick to understand; as, an apprehensive scholar.  
 2. fearful; in expectation of evil; as, we were apprehensive of fatal consequences.  
 3. having to do with perception or understanding.  
 4. cognizant; aware; conscious. [Archaic.]  
**apprehensively**, *adv.* in an apprehensive manner.  
**apprehensiveness**, *n.* the quality of being apprehensive.  
**apprentice**, *n.* [ME. *aprentice*, *aprentis*; OFr. *aprentis*; Fr. *aprentis*, from *aprendre*, to learn, L. *apprehendere*, to seize, take hold of.]  
 1. a person under legal agreement to work a specified length of time for a master craftsman in a craft or trade in return for instruction and formerly support.  
 2. in old English law, a barrister, considered learner of law till of sixteen years standing. [Obs.]  
 3. one not proficient in a subject; a beginner in a trade, occupation, or profession; novice; as, a literary apprentice.  
**apprentice**, *v.* **apprenticed**, *pt.* **apprenticing**, *pp.* to place or accept as an apprentice; indenture.  
**apprenticeship**, *n.* 1. the term for which an apprentice serves.  
 2. the service, state, or condition of an apprentice; preliminary practice or training.  
**appressed**, *appresser*, *a.* [L. *appressus*, *pp.* of *appressere*, to press to; *ad*, to, and *pressere*, to press.] in botany and zoology, pressed close to or lying flat against a surface.  
**apprised**, *appriser*, *v.* **apprised** or **apprized**, *pt.* **apprising** or **apprizing**, *pp.* [Fr. *appriser*, *pp.* of *apprandre*, to teach or inform, from L. *apprehendere*, to lay hold of.] to inform verbally or in writing; notify.  
**appriser**, *n.* notice. [Obs.]  
**apprisal**, *n.* appraisal.  
**appriser**, *v.* **apprised**, *pt.* **apprising** or **apprizing**, *pp.* same as *appriser*.  
**apprisement**, *n.* appraisement. [Obs.]  
**appriser**, *n.* 1. appraiser. [Rare.]  
 2. in Scots law, creditor for the benefit of whom an appraisal is made.  
**approach**, *v.* **approached**, *pt.* **approaching**, *pp.* [ME. *approchen*; OFr. *aprochier*; L. *appropiare*; from L. *ad*, to, and *propius*, comp. of *prope*, near.]  
 1. to come or go near or nearer; to draw near; as, to approach menacingly; also, to draw near in point of time; as, the dinner hour approaches.  
 2. to draw near, in a figurative sense; to advance near to a point aimed at; to approximate; as, he approaches to the character of the ablest statesman.  
**approach**, *v.* 1. to come near to in character or quality; as, Pope approaches Virgil in smoothness of versification.  
 2. to draw near or nearer to, in place or time; as, to approach home.  
 3. to bring near; to advance; as, the colonel approached his troops to the town.  
 4. to make military approaches to, including the necessary works and fortifications; as, the Prussians approached Paris with due care.  
 5. to make advances, a proposal, or a request to.  
**approach**, *n.* 1. the act of drawing near; a coming or advancing near; as, he was apprised of the enemy's approach; the approach of the holidays.  
 2. an approximation; resemblance.  
 3. [often in pl.] an advance or overture to someone.  
 4. a way of coming toward or reaching a person or place; access.

5. in golf, a stroke after the tee shot, meant to knock the ball onto the putting green.  
 6. an approaching (which see).  
 7. [pl.] in fortification, the works thrown up by besiegers to protect them in their advances toward a fortress or fortified town.  
**approachability**, *n.* approachableness.  
**approachable**, *a.* able to be approached; specifically, (a) easy of access; (b) friendly; informal.  
**approachableness**, *n.* the state of being approachable.  
**approacher**, *n.* one who approaches.  
**approaching**, *n.* in horticulture, the act of ingrafting a sprig or shoot of one tree into another, without cutting it from the parent stock; called also *inarching*, or *grafting by approach*.  
**approachless**, *a.* unapproachable; without an approach.  
**approachment**, *n.* approach. [Obs.]  
**approbate**, *a.* approved. [Obs.]  
**approbate**, *v.* **approbated**, *pt.* **approbating**, *pp.* 1. to express approbation of; to manifest a liking for or degree of satisfaction with; to approve.  
 2. to sanction.  
 3. in Scots law, to approve as valid.  
 4. to approve and reprobate; in Scots law, to accept and reject, as when one tries to profit by part of a deed while rejecting the rest.  
**approbation**, *n.* [L. *approbatio*, an approving, assenting to, from *approbare*, to approve.]  
 1. the act of approving; approval; commendation.  
 2. sanction.  
 3. a novitiate or probation. [Obs.]  
 4. attestation; proof. [Obs.]  
 5. Syn.—approval, assent, concurrence, commendation, praise, permission, liking, consent.  
**approbative**, *a.* approving; implying approbation.  
**approbative-ness**, *n.* 1. in phrenology, love of approbation.  
 2. the quality of being approbative.  
**approbator**, *n.* one who approves. [Rare.]  
**approbatory**, *a.* containing approbation, expressing approval or sanction.  
**apprompt**, *v.* to prompt; to stimulate. [Obs.]  
**approval**, *n.* 1. approval. [Archaic.]  
 2. proof; the act of testing. [Archaic.]  
**approprate**, *v.* [L. *appropinquare*, to approach, draw near.] to draw near. [Archaic.]  
**appropration**, *n.* a drawing nigh. [Archaic.]  
**approprinquity**, *n.* propinquity; nearness. [Rare.]  
**appropriate**, *v.* **appropriated**, *pt.* **appropriating**, *pp.* [ME. *apropren*; OFr. *aproprier*; Fr. *aproprier*; L. *ad*, to, and *proprius*, one's own.]  
 1. to set apart for, or assign to, a particular use, in exclusion of all other uses; as, a spot of ground is appropriated for a garden; money is appropriated by Congress for public buildings.  
 2. to take to oneself in exclusion of others; to claim or use as by an exclusive right.  
 3. to make suitable. [Rare.]  
 4. in ecclesiastical law, to sever (an ecclesiastical benefice) and annex it to a spiritual corporation, for its perpetual use.  
 5. Syn.—arrogate, assume, seize, usurp.  
**appropriateness**, *n.* 1. belonging peculiarly; special.  
 2. set apart for a particular use or person. [Obs.]  
 3. fit or proper; suitable; as, appropriate manners.  
 4. Syn.—particular, becoming, congruous, suitable, adapted, peculiar, proper, meet, fit, apt.  
**appropriateness**, *n.* a peculiar characteristic; attribute; property. [Obs.]  
**appropriately**, *adv.* in an appropriate or proper manner; suitably; fitly.  
**appropriateness**, *n.* the quality of being appropriate, or especially suitable.  
**appropriation**, *n.* [LL. *appropriatio*, from L. *ad*, to, and *proprius*, one's own.]  
 1. an appropriating or being appropriated.  
 2. a sum of money, or any other thing, set apart for a given purpose; as, an appropri-